Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

NCCOS Sponsored Research Project: Understanding Coral Ecosystem Connectivity in the Gulf of Mexico from Pulley Ridge to the Florida Keys

1.2. Summary description of the data:

This project investigated the role that the mesophotic coral ecosystems (~60–100 m) of Pulley Ridge (off the southwest coast of Florida) play in replenishing key species in the downstream reefs of the Florida Keys and Dry Tortugas. Because of the well-documented decline of Florida's reefs, it is important to identify, protect, and manage sources of larval reef species that can help sustain Florida's reef ecosystems and the tourism economy that depends on it. This interdisciplinary study focused on determining the connectivity of reef species living at Pulley Ridge, the deepest known photosynthetic coral reef off the continental U.S., to those in the Florida Keys, as well as describing the community structure and determining the economic value of Pulley Ridge's communities. Focal species for connectivity studies were the red grouper (Epinephelus morio), the bicolor damselfish (Stegastes partitus), the Indo-Pacific lionfish (Pterois spp.), the great star coral (Montastraea cavernosa), lettuce corals (Agaricia spp.), and the giant barrel sponge (Xestospongia muta). The study was advised by a Stakeholder Advisory Board, a collaboration of federal, state, and nongovernmental stakeholders to ensure the utility of outputs for resource managers.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2011-09 to 2018-02

1.5. Actual or planned geographic coverage of the data:

W: -85, E: -79, N: 28, S: 23

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map, Table, Video, Other

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

Instrument: ADCP, CTD, Drifting Buoy, Fish Trap, Light Trap, MOCNESS Plankton Net, In Situ Ichthyoplankton Imaging System, Video Camera, Still Camera
Platform: Research Vessel, ROV
Physical Collection / Fishing Gear: Fish Trap

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

NCCOS Scientific Data Coordinator

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

NCCOS.data@noaa.gov

2.5. Phone number:

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

NCCOS Scientific Data Coordinator

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- This study is directed at determining the connectivity of reef species living in Pulley Ridge, the deepest known photosynthetic coral reef off the continental U.S., to those in the Florida Keys, as well as describing the community structure and determining the economic value of Pulley Ridge's mesophotic communities. Results from this study are intended for use by resource managers. The project is divided into six separate groups: Physical Oceanography, Biological-physical Modeling, Population Genetics, Population Dynamics, Community Structure, and Bio-economics. There are three research themes: Understanding Connectivity: Four of the research groups are working to address the research objective focused on understanding population connectivity between Pulley Ridge and the Florida Keys. The Biological-physical Modeling group is split into modelers and larval fish biologists. The modelers require information on ocean currents from the Physical Oceanography group, biological data from the fish biologists within their own group, and information on adult fish growth and reproduction from the Population Dynamics group. These data are then used to develop a model to predict the degree of connectivity, which is then verified by information from the Population Genetics group. Assessing Community Structure: To assess the community structure of mesophotic coral ecosystems, the Community Structure group provides for their diverse expertise with benthic organisms (corals, sponges, algae, invertebrates, and fishes) and with remote sampling tools (notably remotely operated vehicles, or ROVs). Information key to describing the full mesophotic community will be provided by the Population Dynamics group as they focus on adult fish such as groupers. The information from these two groups is then synthesized into Geographic Information System (GIS) maps showing the distribution and abundance of benthic organisms across Pulley Ridge. Determining the Value of a Resource: The Bio-economics group will use information from the Community Structure group, as well as assimilate fisheries data, to evaluate the potential economic value of the different components of the mesophotic reef communities. They will do so not just from a fishery perspective, but also for tourism and ecosystem services (fundamental life-support processes upon which all organisms depend).

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):
Model data were verified by observed data. For details of data quality control methods, see Lineage Sources. All users should independently analyze the datasets according to their own needs and standards to determine data usability.

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?
Yes

6.1.1. If metadata are non-existent or non-compliant, please explain:

6.2. Name of organization or facility providing metadata hosting:
NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/51962

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?
Yes

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
PLoS ONE

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://doi.org/10.7284/906594
https://doi.org/10.7284/904902
https://doi.org/10.1371/journal.pone.0203732
https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE107688
https://doi.org/10.25921/ha6m-s136
https://doi.org/10.7284/904845
https://doi.org/10.25921/anqp-1b45
https://doi.org/10.7284/902464
https://doi.org/10.25921/fvpw-6337
https://doi.org/10.25921/hhjr-bm33
https://doi.org/10.25921/kcqd-p997
https://doi.org/10.25921/hskq-8j11
https://doi.org/10.5061/dryad.tj146fn
https://doi.org/10.25921/9gc5-x022

7.3. Data access methods or services offered:
Download from website

7.4. Approximate delay between data collection and dissemination:
Six years

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)
NCEI-MS

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
National Centers for Coastal Ocean Science - Silver Spring, MD

8.3. Approximate delay between data collection and submission to an archive facility:
Six years

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection
NCCOS IT Policy

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.